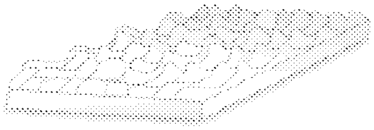
Services & Products

Sand-Blasting / Matting

Matting film surface by the sand-blasting process

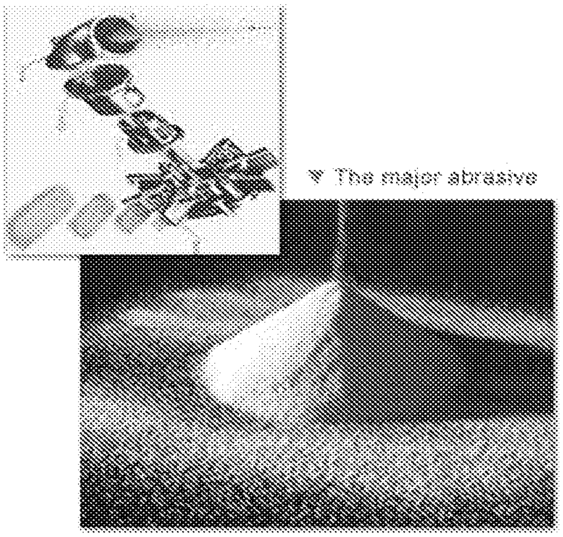
▼ An image of sand-blasted film surface



Sand-blasting is a processing technology for plastic films to roughen its surface by spraying minute sand. The roughened surface becomes matte, and its reflectance will be reduced. The processed films could be provided a lot of functions owing to the increases of the surface areas.

How to process

In a shot-blast equipment, the abrasive is supplied to blades from rotating impellers and sprayed by centrifugal force.
It is different from the air-blasting using compressed air, and the larger quantity of the abrasive can be sprayed at a time, so processable range would be expanded.



▼ The major abrasive

Effects and Purposes

1. **Matting**

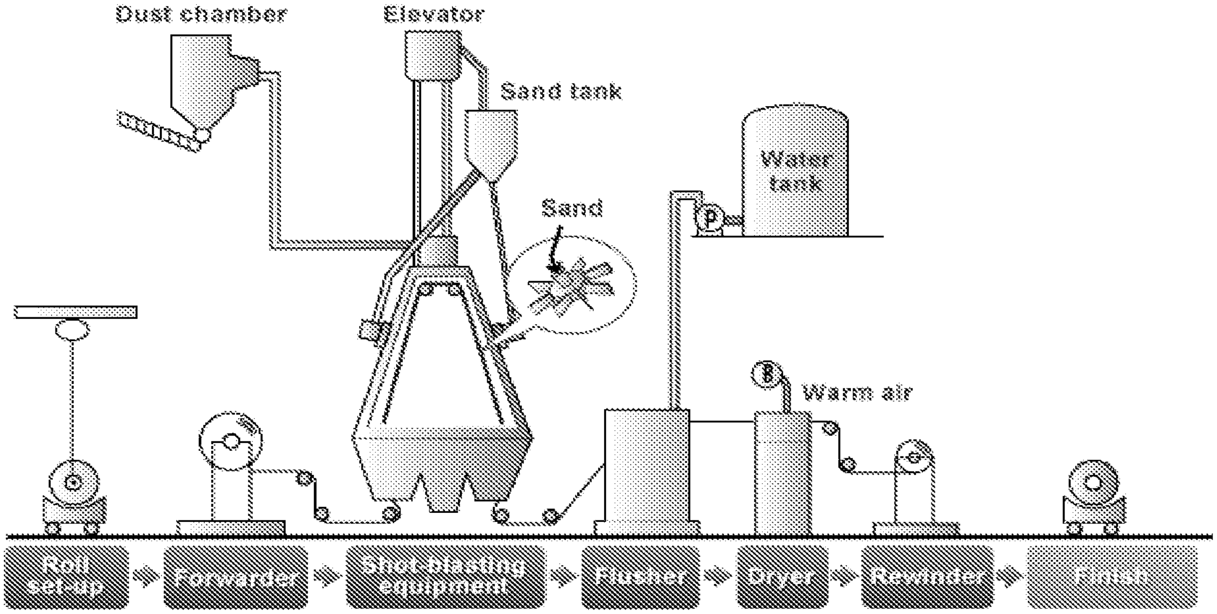
   Purposes: Labels, Building materials
2. **Improvement of the bond strength**

   Purposes: Printing, Lamination
3. **Prevention of the blocking**

   Purpose: Coating
4. **Reduction of the coefficient of friction**

   Purpose: Manufacturing paper

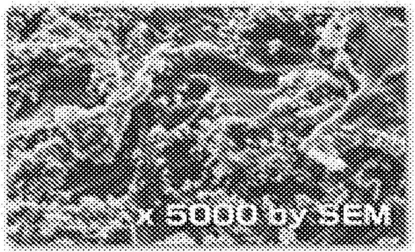
The process of the sand-blasting



Processable films

▨ Size

Thickness (µm)	Width (mm)	The maximum diameter of roll (mm)
16 to 300	300 to 1550	650



▨ Materials Rolled film of PET, PEEK, OPP, PI etc.

Properties

Types of processes		TypeA			TypeD			Clear base	
Thickness of PET (µm)		25	50	100	25	50	100	25	50
Surface gloss ratio (%)		7	6	6	14	11	8	148	137
Surface roughness	Ra (µm)	0.345	0.572	0.641	0.283	0.340	0.431	0.182	0.089
	Rmax (µm)	6.441	6.473	7.732	4.181	4.323	7.150	2.364	1.932
Surface tension of water (mN/m)		58 <	58 <	58 <	58 <	58 <	58 <	38 to 40	38 to 40
Total light transmittance		96	96	94	96	96	95	90	90
Diffusion light transmittance		70	73	74	53	61	66	3	7
Parallel light transmittance		26	23	20	43	35	29	87	83
Haze		72	76	79	55	63	68	3	8
Dynamic coefficient of friction (Ave.)		0.36	0.36	0.34	0.38	0.35	0.32	0.40	0.40
Static coefficient of friction (Ave.)		0.46	0.47	0.44	0.49	0.45	0.43	0.50	0.50

Above data is obtained by measurement under specific conditions, not standardized.

Page top